

## Analytical Paper

### Analysis in Brief

# Manufacturing: The Year 2011 in Review

by Elizabeth Richards and Michael Schimpf



Manufacturing and Energy Division

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# Manufacturing: The Year 2011 in Review

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The following standard symbols are used in Statistics Canada publications:

- . not available for any reference period
- .. not available for a specific reference period
- ... not applicable
- 0 true zero or a value rounded to zero
- 0<sup>s</sup> value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
- P preliminary
- r revised
- x suppressed to meet the confidentiality requirements of the *Statistics Act*
- E use with caution
- F too unreliable to be published
- \* significantly different from reference category ( $p < 0.05$ )

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## About this article

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## *Manufacturing: The Year 2011 in Review*

by Elizabeth Richards and Michael Schimpf

### 1 Summary

The Canadian manufacturing sector continued to recover in 2011 following the economic downturn of 2009. Higher sales reflected greater domestic and foreign demand for Canadian manufactured products. Manufacturing sales advanced 7.8% in 2011 to \$571.2 billion.

Manufacturers in 14 out of 21 industries reported higher sales in 2011 compared to 2010. Gains in the petroleum and coal products industry contributed greatly to the rise in manufacturing sales. Primary metals, transportation and machinery manufacturers also reported higher sales and contributed to the overall increase. Sales in machinery were at a record high in 2011. Over one-third of the sales advance in machinery was reported in mining and oil and gas field equipment machinery. Increased capital expenditures in the conventional and non-conventional oil and gas extraction sector in the last few years have fostered growth in this industry.

Part of the sales advance in 2011 was offset by a few industries which posted declines. Wood, printing and paper manufacturers reported the most significant decreases in dollar terms. These industries have suffered from diminishing demand in the last decade and sales had started to decline before the recent economic downturn.

Manufacturing sales increased in all provinces in 2011. Manufacturing activity in Ontario was bolstered by higher sales in the transportation industry while Alberta benefitted from increased activity in the oil and gas extraction sector. In 2011, three provinces and one territory surpassed their pre-downturn nominal sales levels.

Other indicators also support that Canadian manufacturing is continuing to recover from the economic downturn. In 2011, employment in manufacturing, as measured by the monthly average of manufacturing jobs, increased for the first time since 2000. Manufacturers also reported higher profits and capital expenditures. In terms of the sector's international position, manufacturers continued to receive a high level of foreign direct investment in 2011. Similarly, foreign demand for Canadian manufactured goods increased, with total exports rising by 7.9% to \$280.4 billion in 2011.

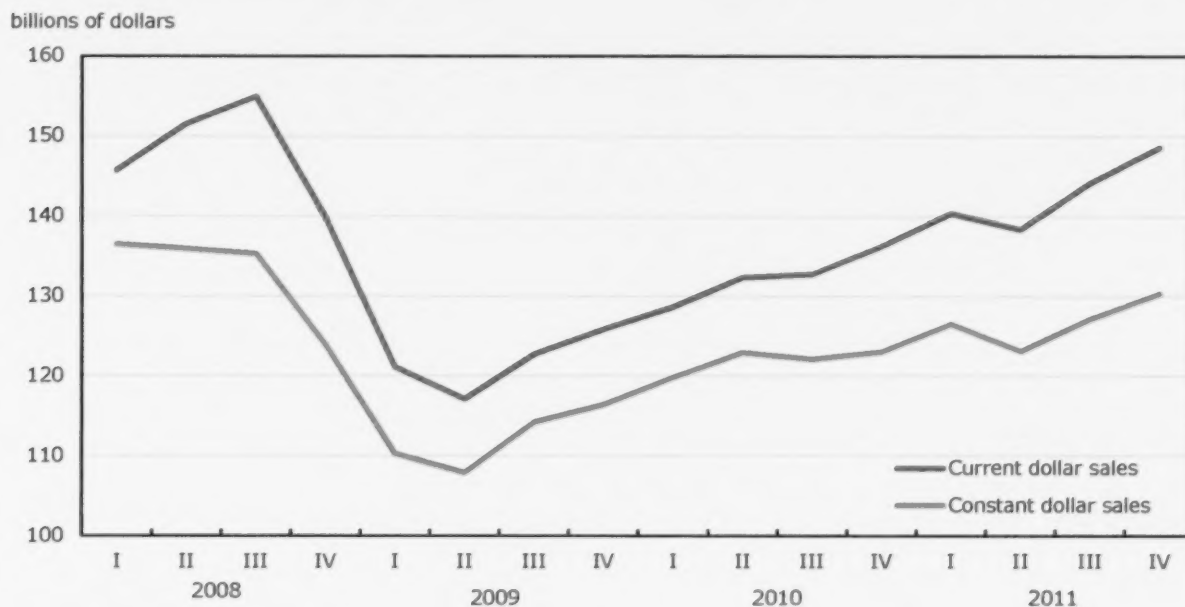
### 2 Manufacturing activity continued to improve in 2011

Total Canadian manufacturing sales increased 7.8% in 2011 to \$571.2 billion dollars as a result of gains in 14 of 21 manufacturing industries.<sup>1</sup> The increase in 2011 was slightly less than the 8.9% advance in 2010. Manufacturing sales had been on the rise in the last decade until the start of the economic downturn. Starting in 2002, sales increased each year until reaching peak levels in 2006. Sales stayed relatively flat in 2007 and 2008, and then dropped by 17.8% in 2009. In 2011, most industries continued to recover from the downturn following gains in 2010. Some industries have even surpassed their pre-downturn sales levels. However, total manufacturing sales in 2011 remained 4.4% lower than sales recorded in 2007.

From a quarterly perspective, both current and constant dollar sales rose in three out of the four quarters in 2011, with a decline occurring in the second quarter. Overall, constant dollar sales rose by 3.9% in 2011.

1. Data in this paper are not seasonally adjusted, unless otherwise noted.

Chart 1  
Quarterly manufacturing sales, seasonally adjusted



Source(s): Statistics Canada, CANSIM tables 304-0014 and 377-0008

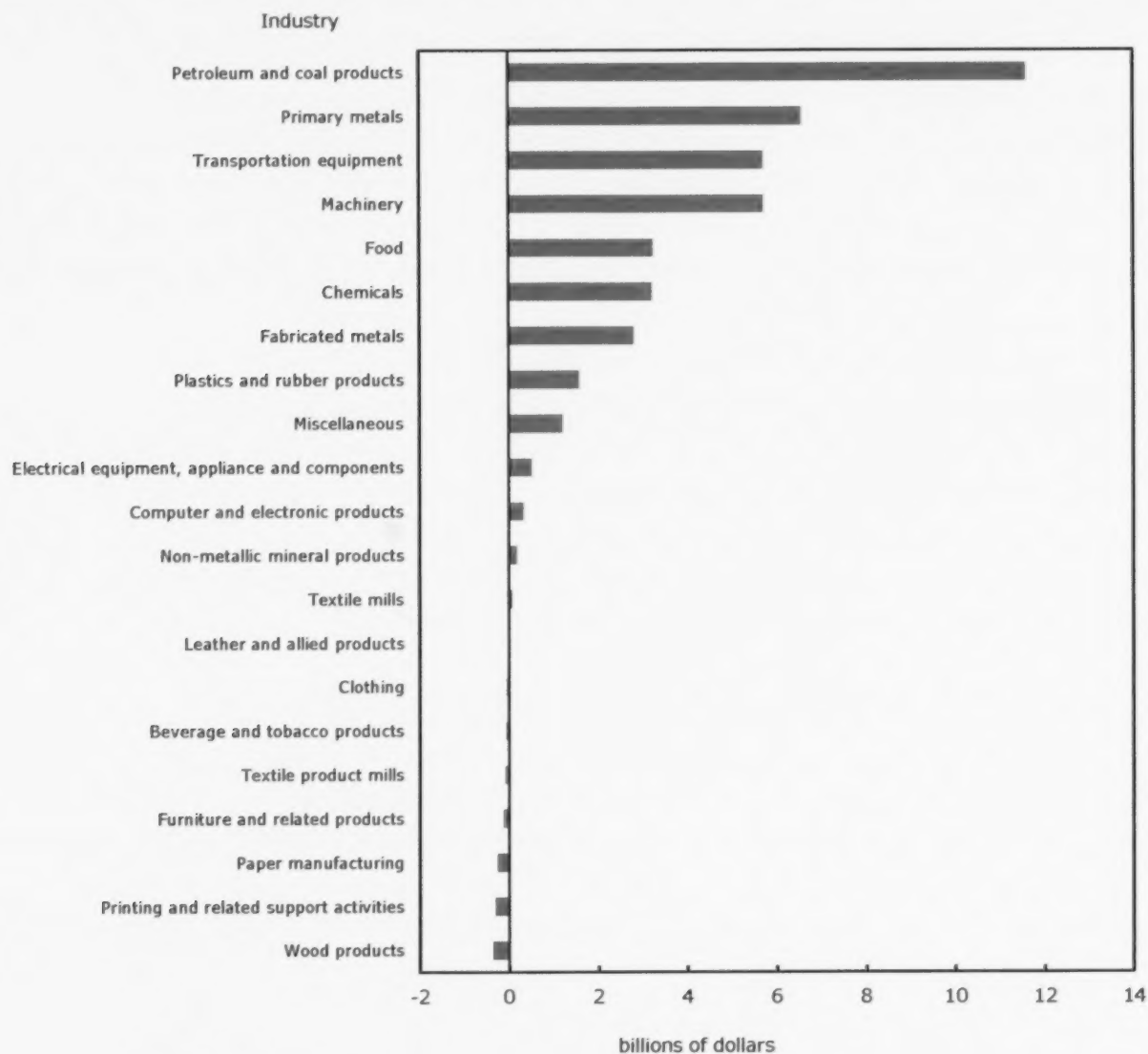
### 3 Sales by industry

A number of industries recorded higher sales in 2011. On the non-durable goods side, sales rose 7.1% to \$284.1 billion, mostly reflecting a gain in the petroleum and coal products industry. Higher sales of petroleum and coal products contributed 61.3% to the overall increase in non-durable goods sales. Other contributors to the increase included the food, chemical, and plastics and rubber products industries.

On the durable goods side, the 8.5% rise in sales to \$287.1 billion reflected gains in a wider number of industries. In particular, higher sales were recorded for the primary metal, transportation equipment, machinery, and fabricated metal products industries.



Chart 2  
Dollar change from 2010 by industry



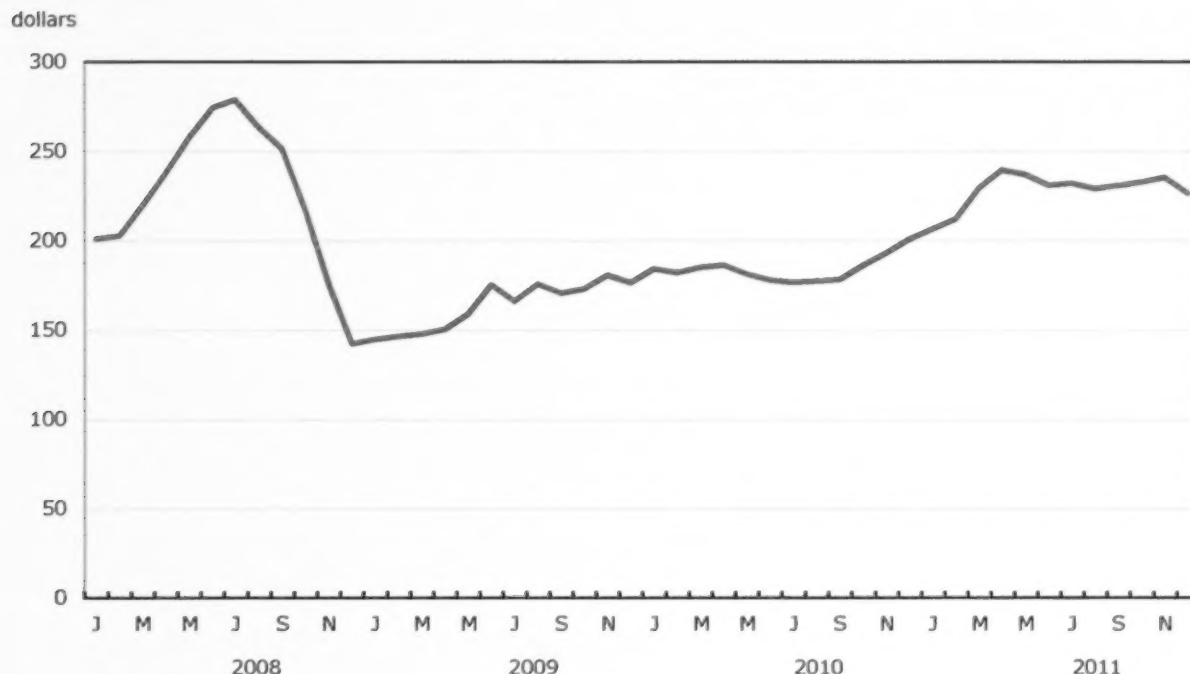
Source(s): Statistics Canada, Manufacturing industries, CANSIM table 304-0014

### 3.1 Petroleum and Coal

Petroleum and coal product manufacturers reported an increase in sales of 17% to \$79.7 billion, the largest movement by industry, in dollar terms. It is important, however, to note that the gains in petroleum and coal products in 2011 were mainly price-driven, as shown by the Industrial Price Product Index (IPPI).

Chart 3

Price index for petroleum and coal products



Source(s): Statistics Canada, Industrial product price index, CANSIM table 329-0057

Prices for the petroleum and coal products industry were substantially higher (+24.2%) in 2011 compared to 2010. Prices increased in the spring, reaching a high in April not seen since September 2008. In 2011, political unrest led to disruptions of crude oil extraction in the Middle East and in North Africa, affecting global supply. Although the production losses were offset by increased output in other countries, prices remained high through most of 2011.<sup>2</sup>

### 3.2 Primary Metals

Primary metals posted the second largest increase in sales in dollar terms, up 15.6% to \$48.5 billion. Advances in the non-ferrous metals and aluminum industries accounted for over 70% of the year-over-year increase. Part of the growth in non-ferrous metals reflected higher prices. In contrast to non-ferrous metals, the growth in aluminum was primarily volume-based, with prices only up by 3.8% on average.

Coinciding with the rise in sales of primary metals in 2011, capital expenditures in primary metals rose by 44.2% to \$3 billion, the largest increase in capital expenditure when measured by industry. Primary metals posted

<sup>2</sup> For more information on factors affecting supply, demand and prices, see: Christof Rühl. *Energy in 2011 – disruptions and continuity*. BP Statistical Review of World Energy, June 2012. London, United Kingdom.

the highest capital expenditures of all manufacturing industries in 2010 and in 2011. Preliminary intentions for 2012 indicate that primary metals should continue to receive a high level of investment in 2012.

### 3.3 Transportation Equipment

In 2011, sales of transportation products increased by 6.7% to \$91 billion. All seven industries that make up transportation equipment manufacturing reported gains, with over three-quarters of these gains coming from aerospace products and parts, motor vehicle assembly, and other transportation equipment manufacturing combined. The growth was volume based, as prices in transportation dropped by 1.7% in 2011.

Production in aerospace products and parts advanced 14.9% to \$15.9 billion in 2011. After reaching an all-time high of \$18.6 billion in 2008, decreases followed in 2009 and in 2010. Rebounding in 2011, production now stands at 85.9% of its 2008 annual value.

Sales in motor vehicle manufacturing rose 3.2% to \$45.2 billion in 2011. Sales had peaked in 1999 at \$78.3 billion and have been trending downwards since. After unprecedented decreases of over 25% in both 2008 and 2009 this industry began to recover in 2010, with sales up 29.9% to \$43.8 billion over 2009. However, the pace of recovery slowed in 2011. The smaller increase was partly related to supply disruptions following the tsunami in Japan in March 2011. Indeed, imports from Japan for motor vehicle and motor vehicle parts manufacturers dropped by 58.7% in April 2011 and did not recover to previous levels until the fall. Hence, manufacturers in both the motor vehicle assembly and the motor vehicle parts industries reported that a shortage of inputs in April and May of 2011 affected their ability to get orders out.<sup>3</sup>

In 2011, exports of transportation goods in Canadian dollars increased by 2.4% according to Industry Canada trade data.<sup>4</sup> Motor vehicle manufacturing was largely responsible for the increase, which was partly offset by decreases in exports of aerospace product and parts and railroad rolling stock. An increase in exports to the United States was mainly responsible for the gains in motor vehicle sales abroad. According to the US Census Bureau, retail sales for autos and other motor vehicles in the United States increased by 11.5% in 2011.<sup>5</sup> After dropping by 28.2% over 2008 and 2009, sales started to recover in 2010, indicating stronger demand for autos in the United States.

### 3.4 Machinery

In 2011, machinery sales rose by 19.7% reaching \$34.6 billion. The growth in machinery was mostly volume-based, as machinery prices advanced only 0.5% for the year.

Other indicators for the machinery industry also reflect growth. The industrial capacity utilization rate for machinery rose by 9.1% to 78.2%, the highest percentage increase of all manufacturing industries in 2011. Capital expenditures in machinery increased by 23.2% in 2011 and based on intentions for 2012, they are expected to increase a further 25.6%. In addition, the machinery industry attracted 14% more foreign investment than in the previous year, most of which came from the United States, whose investment increased by 17.8% in 2011.

The mining and oil and gas field equipment machinery manufacturing sub-industry was an important source of the growth in sales. Sales increased 46.8% in 2011 to \$6.4 billion, over one third of the dollar increase in machinery. A large portion of the increase in sales was related to higher demand for products by the oil and gas extraction sector, as reflected by a substantial rise in capital expenditures in recent years.

3. Import data are from Industry Canada, Trade data online. See: <http://www.ic.gc.ca/eic/site/tdo-dcd.nsl/eng/home>

4. Export data are from Industry Canada, Trade data online. See: <http://www.ic.gc.ca/eic/site/tdo-dcd.nsl/eng/home>

5. US Retail data are from the US Census Bureau. See: <http://www.census.gov/retail>

Table 1

Capital expenditures in the oil and gas extraction sector, \$ millions

	2007	2008	2009	2010	2011	2012
Oil and gas extraction	46,765	50,196	30,749	48,280	55,887	64,149
Conventional oil and gas extraction	29,949	29,532	20,198	31,125	34,275	37,222
Non-conventional oil extraction	16,816	20,663	10,551	17,155	21,612	26,927

1. Most recent 2 years of data are preliminary actuals and intentions.

Source(s): Statistics Canada, Capital and repair expenditures, CANSIM table 029-0007

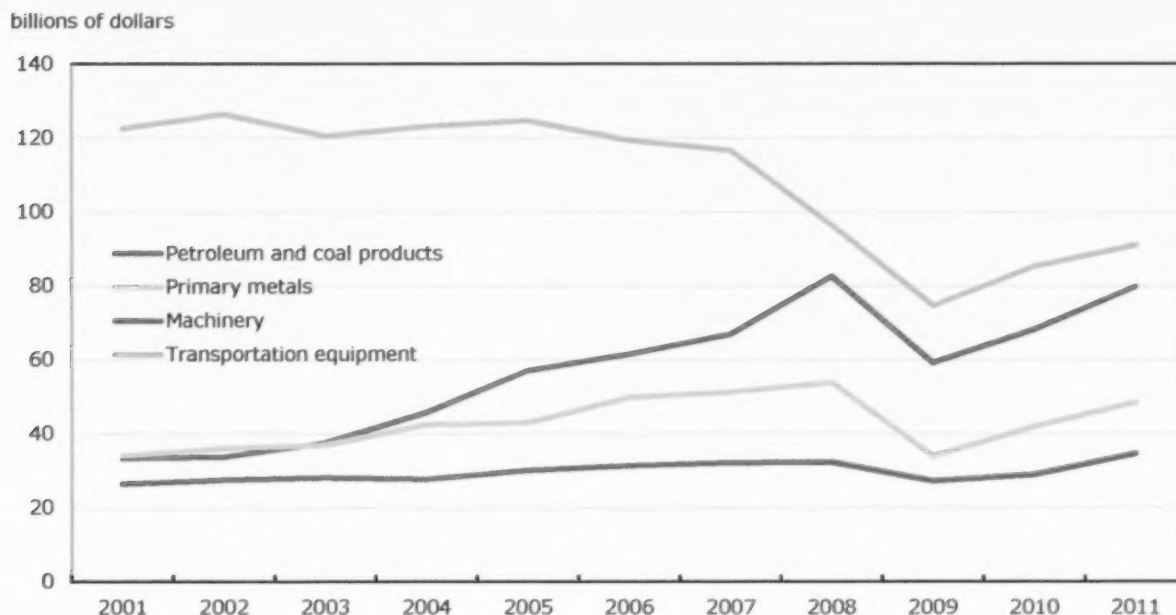
Although conventional and non-conventional oil and gas capital expenditures reached a low point in 2009, both increased rapidly in 2010 and 2011. Total oil and gas capital expenditures of \$55.9 billion in 2011 were 15.8% higher than 2010 and 81.8% higher than 2009.

Higher demand for oil and gas field equipment in 2011 was also reflected in a drilling activity increase, as measured by average rig counts. In 2009, drilling activity in North America and internationally decreased significantly, by 30.9% worldwide and over 40% in both Canada and in the United States. Regaining most of its value in 2010, worldwide drilling activity increased again in 2011, to levels which have not been reported since 1985. Worldwide, average rig counts were up by 16.1% in 2011, whereas over 20% more rigs were in operation in both Canada and in the United States.<sup>6</sup>

The mining and oil and gas field equipment industry was not the only industry affected by higher capital expenditures in the oil and gas extraction industry. Substantial gains were also reported in the other general purpose machinery manufacturing industry, where annual sales rose 17.1% to \$6.9 billion. Note that the goods produced in this industry include industrial pumps and compressors, products currently in demand to support infrastructure projects in the oil and gas extraction sector.

6. Data on rig counts are from Baker Hughes. See their webpage: [http://investor.shareholder.com/bhi/rig\\_counts/rc\\_index.cfm](http://investor.shareholder.com/bhi/rig_counts/rc_index.cfm)

Chart 4  
Sales of goods manufactured for selected industries



Source(s): Statistics Canada, Manufacturing industries, CANSIM table 304-0014

### 3.5 Chemicals, food and fabricated metal products

Also on the positive side, manufacturing sales of chemical products were up 7.3% to \$47.1 billion, largely reflecting higher sales of basic chemicals, fertilizers and pesticides, and resins and synthetic rubber and fibres. However, some chemical industries, including pharmaceutical and medicine manufacturing, recorded lower sales in 2011.

Sales in the food industry rose 4.0% to \$83.7 billion in 2011. The increase largely reflected a 4.8% advance in food prices in 2011 compared to 2010.

In the fabricated metal products industry, sales rose 9.1% to \$33.4 billion in 2011. Several sub-industries including other fabricated metal product (+17.4%) and boiler, tank and shipping container manufacturing (+18.0%) contributed to the overall gain in the fabricated metal products industry.

### 3.6 Offsetting Industries

Despite overall sales increases in many industries, seven of 21 industries posted decreases in 2011, with wood, printing and paper manufacturers reporting the largest reductions in dollar terms.

### 3.7 Wood products

Sales of wood products retreated 1.9% to \$18.5 billion in 2011. This was a slight setback from a 12.9% rebound in wood products in 2010, the first uptick for this industry since 2004. The wood products industry had declined sharply from 2005 to 2009, attributable to a significant downturn in the demand for Canadian wood products.

In contrast to the decrease in sales in 2011, exports of wood products increased in both 2010 and 2011. An advance in exports to Asia in 2011 more than offset declining Canadian wood exports to the United States, leading to an overall increase of 1.4% in exports.<sup>7</sup>

### **3.8 Printing, paper and clothing**

Sales also declined in the printing and paper industries in 2011. However, both of these industries had become less important for Canadian manufacturing well before the recent downturn. The printing industry peaked in 2003 with sales of \$12.4 billion but has been mostly declining since. With its latest decrease in 2011, printing stands at just over two-thirds of its 2003 value. Employment in printing has followed suit. Since 2003, employment in printing has dropped by approximately 25%.

Similar to the printing industry, paper product sales reached a record high of \$38.2 billion in 2000 but have been generally trending downwards since. Although paper manufacturing sales were down by just 1.0% in 2011 to \$26.2 billion, sales in the industry stand at about two-thirds of their 2000 value. Moreover, the number of people employed in the paper industry has decreased to almost half since 2000.

Another industry which suffered a significant decline in the last decade is the clothing industry. Hitting its peak in 2002 when sales totalled \$8 billion, clothing manufacturing has lost almost three-quarters of its value since then, reporting \$2.3 billion in annual sales in 2010 and \$2.2 billion in 2011. The reduction since 2002 coincided with rising Chinese imports, which have more than doubled since that year and now make up over half of all clothing imports to Canada. Clothing imports from Bangladesh, Cambodia and Vietnam also rose substantially from 2002 to 2011. In contrast, imports from the United States have decreased by 35.7% and those from Mexico have stayed relatively flat.<sup>8</sup>

### **3.9 Comparison to pre-downturn levels**

Overall, the manufacturing sector continued to recover towards the pre-downturn sales levels recorded in 2008. Some industries, including miscellaneous, food and machinery manufacturing have even surpassed their 2008 level in nominal terms. Manufacturers in price-driven industries, such as chemicals, petroleum and coal products and primary metals reported strong advances in 2010 and 2011, yet are still below their pre-recession levels. Others, such as clothing and wood products have suffered from diminishing demand or global competition in the past decade with sales relatively low compared to historic levels.

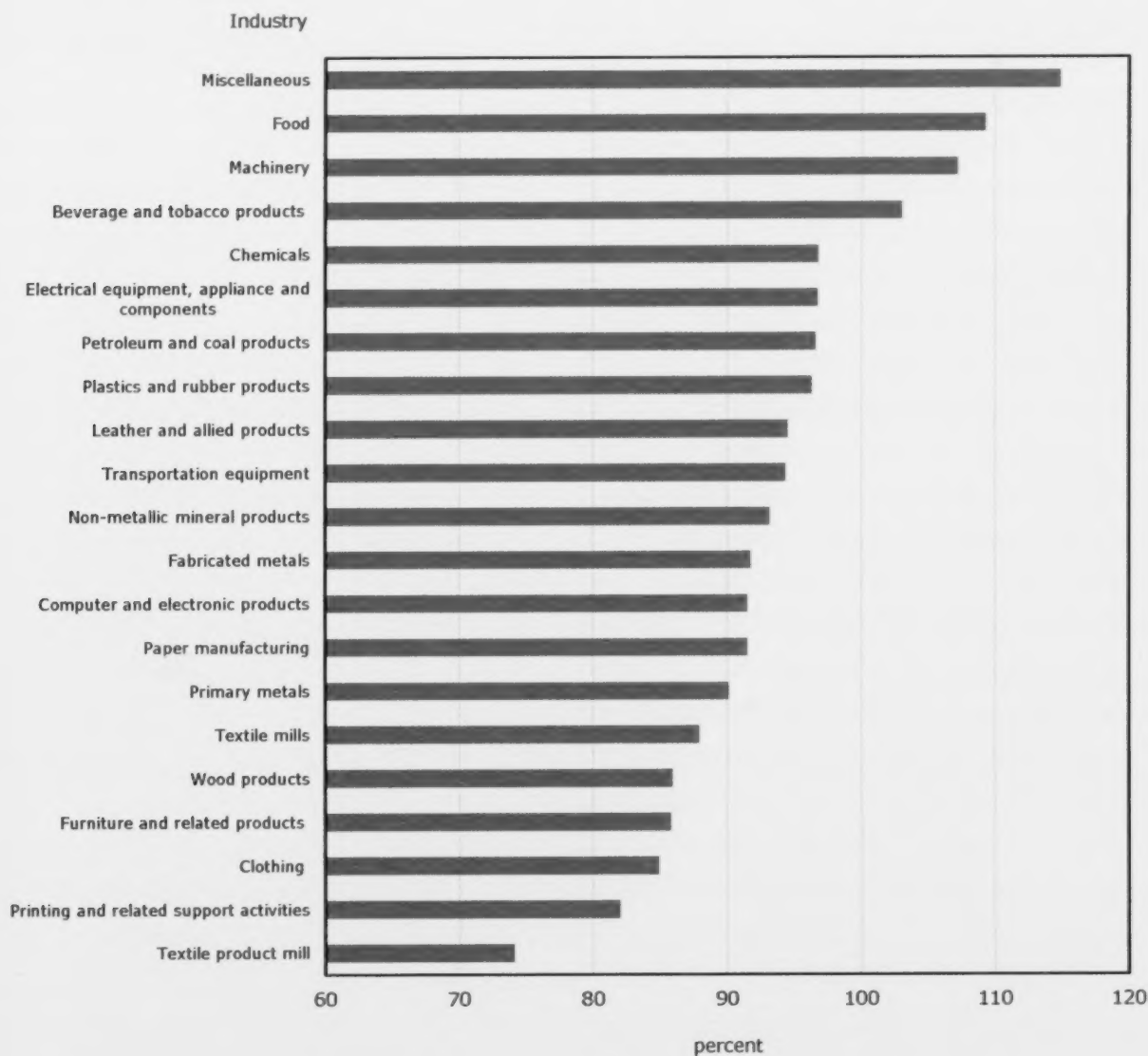
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<sup>7</sup> Export data are from Industry Canada, Trade data online. See: <http://www.ic.gc.ca/eic/site/telo-dcd.nsf/eng/home>

<sup>8</sup> Import data are from Industry Canada, Trade data online. See: <http://www.ic.gc.ca/eic/site/telo-dcd.nsf/eng/home>



Chart 5  
Manufacturing sales by industry in 2011, as a percentage of 2008 sales



Source(s): Statistics Canada, Manufacturing industries, CANSIM table 304-0014

#### 4 Provincial Dimension

In 2011, manufacturing sales increased in all provinces and territories, with the exception of Nunavut. Ontario, Alberta and Quebec were primarily responsible for the national gain. Although it is the main contributor to the

increase in 2011, Ontario's importance in Canadian manufacturing has decreased in the last ten years, while other provinces have grown in size and importance. In fact, all provinces except for Ontario, British Columbia and Prince Edward Island make up a larger part of Canadian manufacturing in 2011 than they did ten years ago. The most impressive shift has occurred in Alberta's manufacturing sector, which has grown by over 50% in the last ten years.

Table 2

Manufacturing sales by province, unadjusted sales, in millions of current dollars

	2008 Sales	2009 Sales	Change, 2008 to 2009	2010 Sales	Change, 2009 to 2010	2011 Sales	Change, 2010 to 2011
	dollars		percent	dollars	percent	dollars	percent
Newfoundland and Labrador	6,574	4,377	-33.4	5,167	18.1	5,517	6.8
Prince Edward Island	1,336	1,316	-1.5	1,207	-8.3	1,211	0.3
Nova Scotia	10,643	8,819	-17.1	9,799	11.1	10,813	10.4
New Brunswick	17,815	14,240	-20.1	17,257	21.2	19,809	14.8
Quebec	147,003	126,289	-14.1	132,116	4.6	139,193	5.4
Ontario	269,384	218,810	-18.8	243,307	11.2	258,009	6.0
Manitoba	16,373	14,653	-10.5	14,422	-1.6	15,316	6.2
Saskatchewan	13,181	11,364	-13.8	10,911	-4.0	12,557	15.3
Alberta	70,146	53,951	-23.1	60,074	11.3	70,874	18.0
British Columbia	39,435	32,798	-16.8	35,542	8.4	37,859	6.5
Yukon	35	28	-18.9	31	9.4	37	20.4
Northwest Territories	40	16	-59.3	9	-43.1	9	1.7
Nunavut	6	5	-14.4	5	4.0	4	-25.9

Source(s): Statistics Canada, Manufacturing industries, CANSIM table 304-0015

Manufacturing activity in Ontario was bolstered in 2011 by higher sales in the transportation equipment, primary metal and petroleum and coal product industries. These industries contributed just over half of the provincial gain. In the transportation equipment industry, sales of motor vehicles and motor vehicle parts were up compared to 2010.

Manufacturing sales in Alberta rose 18.0%, reaching a high of \$70.9 billion in 2011. The petroleum and coal products, chemical, and machinery industry were responsible for most of the gain. Mining and oil and gas field equipment machinery manufacturing was the main contributor to the overall increase in machinery in Alberta. In fact, over three-quarters of mining and oil and gas field equipment machinery manufacturing in Canada is located in Alberta. Alberta manufacturers were responsible for over 80% of the national increase in 2011 for sales in this industry.

In Quebec, higher sales in the primary metals industry and the transportation equipment industry contributed to just under two-thirds of the provincial increase. Almost half of all primary metals manufacturing in Canada and 80% of Canadian aluminum production is located in Quebec. In the primary metals industry, price increases were largely responsible for the sales rise.

With the recovery in sales in 2010 and 2011 some jurisdictions have now surpassed the nominal value of sales recorded in 2008, as the economic downturn was beginning. In 2011, Nova Scotia, New Brunswick, Alberta and Yukon posted higher nominal sales levels compared to 2008.

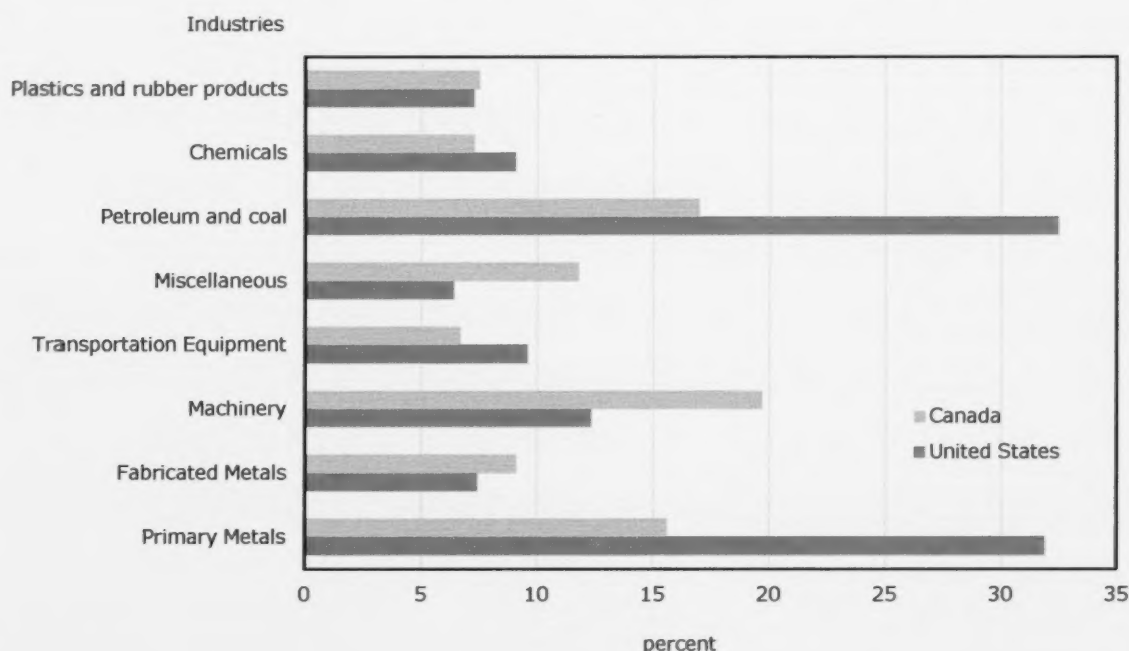
## 5 Comparison with the United States

In the United States, where manufacturing sales are referred to as shipments, sales increased by 11.7% to US\$ 5.5 trillion in 2011 according to the US Census Bureau.<sup>9</sup> This followed an 11.2% rise in 2010. Over 60% of the increase stemmed from the non-durable goods industries. Similar to Canada, petroleum and coal products were mainly responsible for the growth in non-durables. Sales in this industry were up by 32.5% to US\$ 831.5 billion. Food (+10.1%) and chemical products (+9.1%) also played a part in the growth of non-durable sales.

9 US data is from the US Census Bureau, Manufacturers' shipments, inventories and orders survey. See: <http://www.census.gov/manufacturing/m3/index.html>



Chart 6  
Annual growth rates, selected industries



Source(s): Statistics Canada, Manufacturing industries, CANSIM table 304-0014, US Census Bureau, Manufacturers' shipments, inventories and orders survey.

The key industry movers in the U.S. durable goods sector were also similar to Canada. The primary metals (+31.9%), transportation equipment (+9.6%) and machinery (+12.3%) industries were the main U.S. contributors to sales increases in dollar terms in 2011.

Aluminum and nonferrous metals also drove the increase in primary metals, which were up 48.4% to US\$147.3 billion dollars in 2011. Posting similar results for a number of industries, the two countries differ in their source of growth within machinery. In contrast to Canada, higher sales of construction machinery were more important for the expansion in the machinery industry, rather than sales of mining, oil gas and field machinery.

In 2011, transportation equipment manufacturing in the United States increased by 9.6% to US\$ 694 billion. The gains were concentrated in the light truck and utility vehicle, as well as motor vehicle bodies, trailers and parts and nondefense aircraft and parts. Defense aircraft and parts offset the gains with a 15% decrease.

## 6 Other Indicators

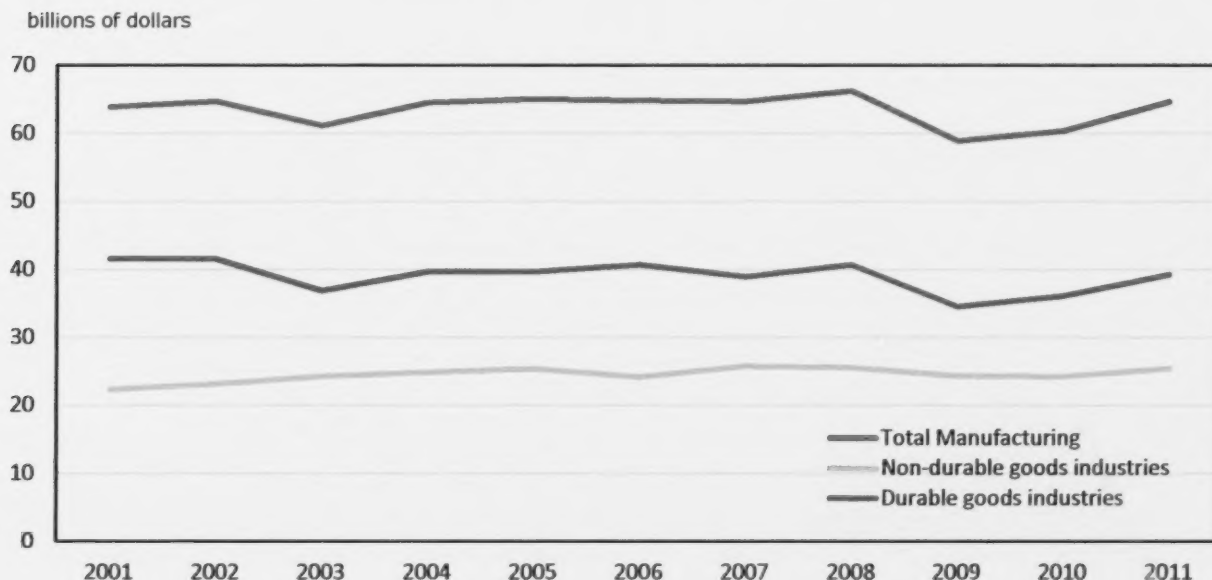
Additional indicators, such as inventories, unfilled orders, employment, investment and trade show that Canadian manufacturing is continuing to recover from the economic downturn. Some of these indicators have even reached record highs, surpassing previous levels as a result of growth in a few key industries.

## 6.1 Inventories<sup>10</sup>

Total inventory levels decreased during the economic downturn, largely as a result of lower inventories of durable goods on hand. In 2011, seasonally adjusted total inventories rose 7.1%, from \$60.3 billion at the end of 2010 to \$64.6 billion in December 2011.

Chart 7

Total inventories in December, seasonally adjusted



Source(s): Statistics Canada, Manufacturing Industries, CANSIM table 304-0014

The increase was mostly driven by gains on the durable goods side of manufacturing, with the machinery industry leading the increases in inventories. Machinery inventories advanced 14.9% to \$6.7 billion from December 2010 to December 2011. The rise was mostly driven by higher inventories in the mining and oil and gas field equipment industry. Inventories were also up in the primary metals (+9.0%), computer and electronic product (+23.9%) and transportation equipment (+7.2%) industries. In the transportation equipment industry, higher levels of aerospace product and parts were mostly responsible for the gain.

For non-durable goods, inventories rose in the food (+8.6%) and petroleum and coal product (+8.3%) industries between December 2010 and December 2011. In the food industry, the rise mostly reflected higher volumes of food products on hand while in the petroleum and coal product industry, the gain was entirely driven by higher prices.

## 6.2 Unfilled Orders<sup>11</sup>

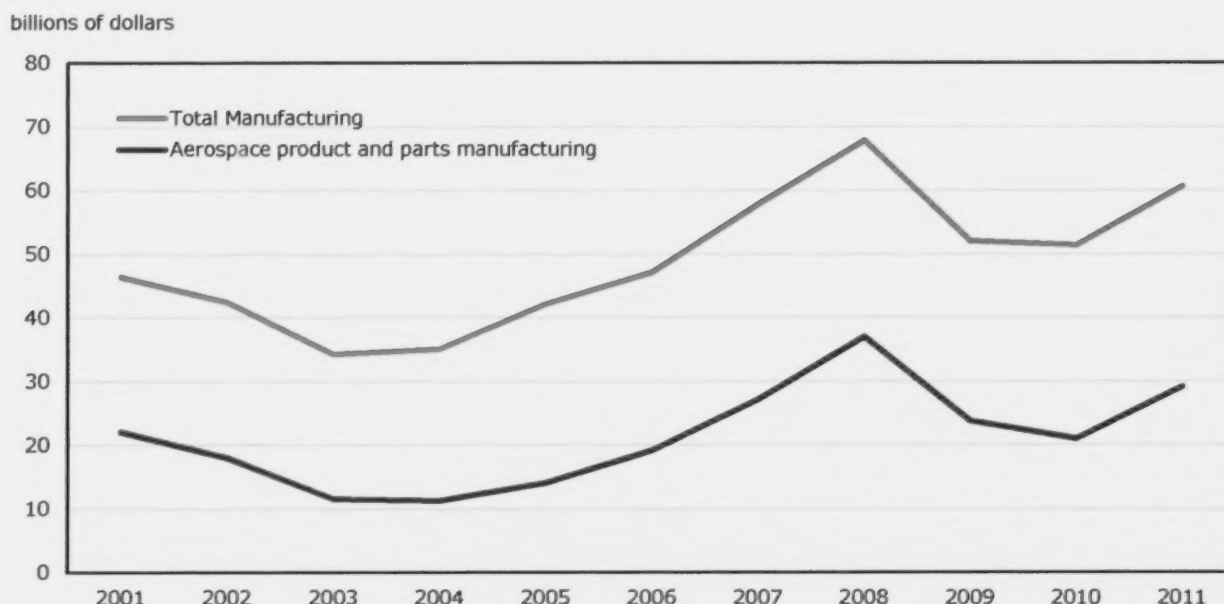
Unfilled orders are a stock of orders that can contribute to future sales, assuming that they are not cancelled. As such, increases in unfilled orders suggest the potential for higher future sales, though the converse is also true. Unfilled orders held by the Canadian manufacturing sector fell substantially during the economic downturn, from a peak of \$69.3 billion in November 2008 to \$51.0 billion in November 2009. Much of the decrease stemmed from a

<sup>10</sup>. Data in this section are seasonally adjusted.

<sup>11</sup>. Data in this section are seasonally adjusted.

decline in the aerospace product and parts industry. Through much of 2010, unfilled orders were relatively flat, but they increased in 2011.

Chart 8  
Unfilled orders in December, current dollars, seasonally adjusted



Source(s): Statistics Canada, Manufacturing Industries, CANSIM table 304-0014

Between December 2010 and December 2011, unfilled orders rose 18.0% to \$60.6 billion. Much of the rise stemmed from a \$4.8 billion advance in unfilled orders in the aerospace product and parts industry in March 2011. Since then, unfilled orders in the aerospace industry have increased a further \$2.6 billion. In total, aerospace unfilled orders rose 38.9% between December 2010 and the end of 2011.

Gains in 2011 were also recorded for the fabricated metals industry, where unfilled orders rose 21.5% to \$6.3 billion. The advance partly reflected higher unfilled orders for boilers, tanks and shipping containers partly associated with oil and gas construction.

### 6.3 Manufacturing employment posts first increase since 2000

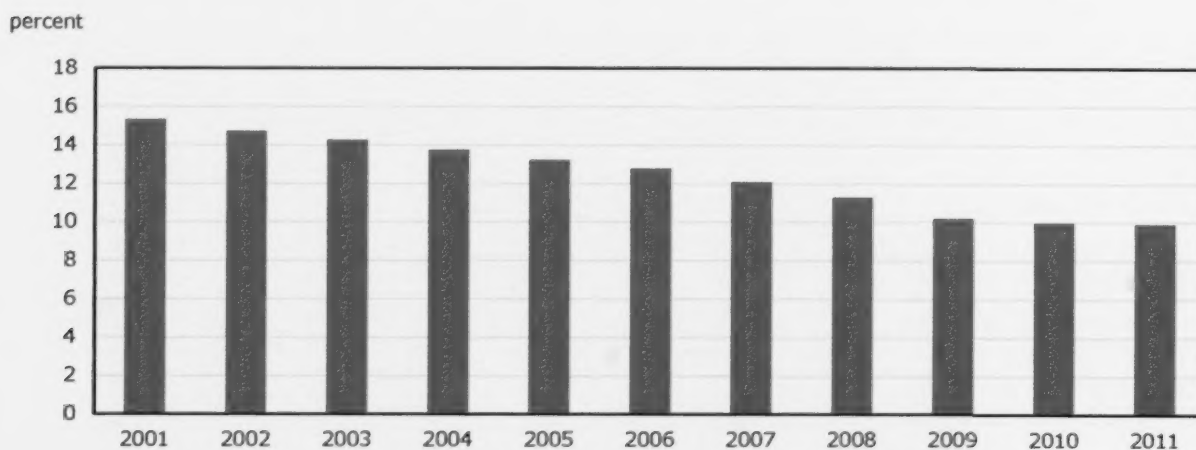
In 2011, the average monthly employment in the manufacturing sector increased by 1.2% to 1.5 million jobs. This is the first advance in manufacturing employment since 2000. Despite the increase, manufacturing's share of total employment relative to the entire economy continued to decrease in 2011, because the increase in total jobs outpaced that of the manufacturing sector.

The most important gains in manufacturing employment were reported in the machinery (+7.6%), fabricated metals (+5.5%) and food (+1.4%) industries. Despite the increases, manufacturers in these industries still employed fewer workers in 2011 than in pre-downturn years. Employment in transportation equipment, which had been trending downwards since 2001 also contributed to the increase and edged up 1.2% in 2011. Most of the gains within transportation equipment stemmed from the motor vehicle body and trailer, as well as motor vehicle parts industries.

From a provincial perspective, Alberta, Ontario and British Columbia posted the most important gains in manufacturing employment, while Quebec reported a slight decrease. The main contributors to the increase in manufacturing jobs in Alberta were machinery and fabricated metal manufacturers. These industries also drove the gains in Ontario's manufacturing employment, along with transportation equipment. Meanwhile, decreases in employment for the wood and aerospace products and parts industries were responsible for the overall drop in Quebec's manufacturing employment.

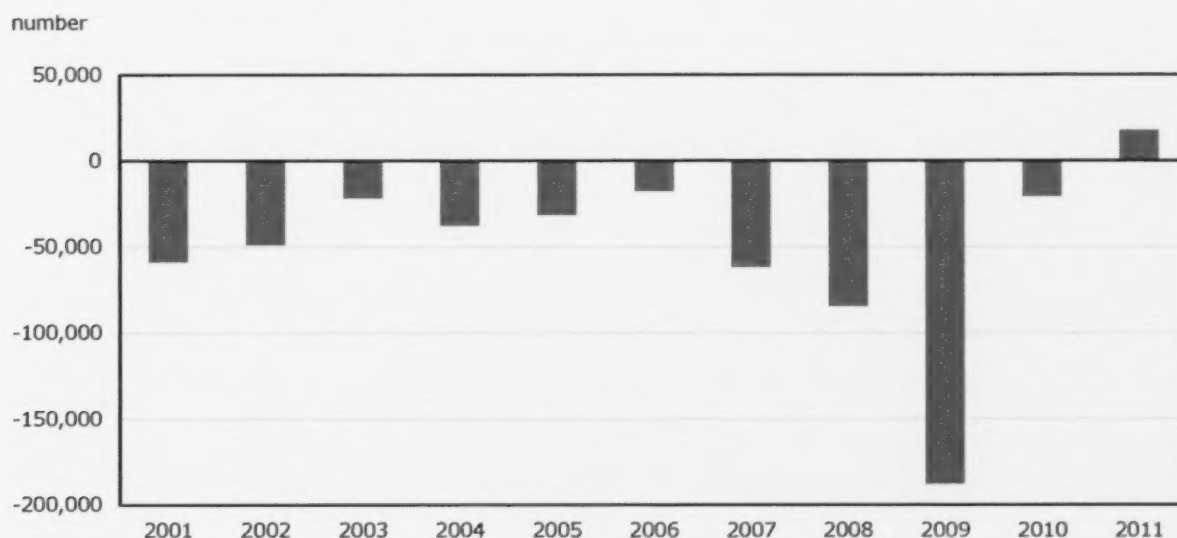
Chart 9

Manufacturing percent of total employment



Source(s): Statistics Canada, Employment (SEPH), CANSIM table 281-0023

Chart 10  
Change in the average annual number of manufacturing jobs



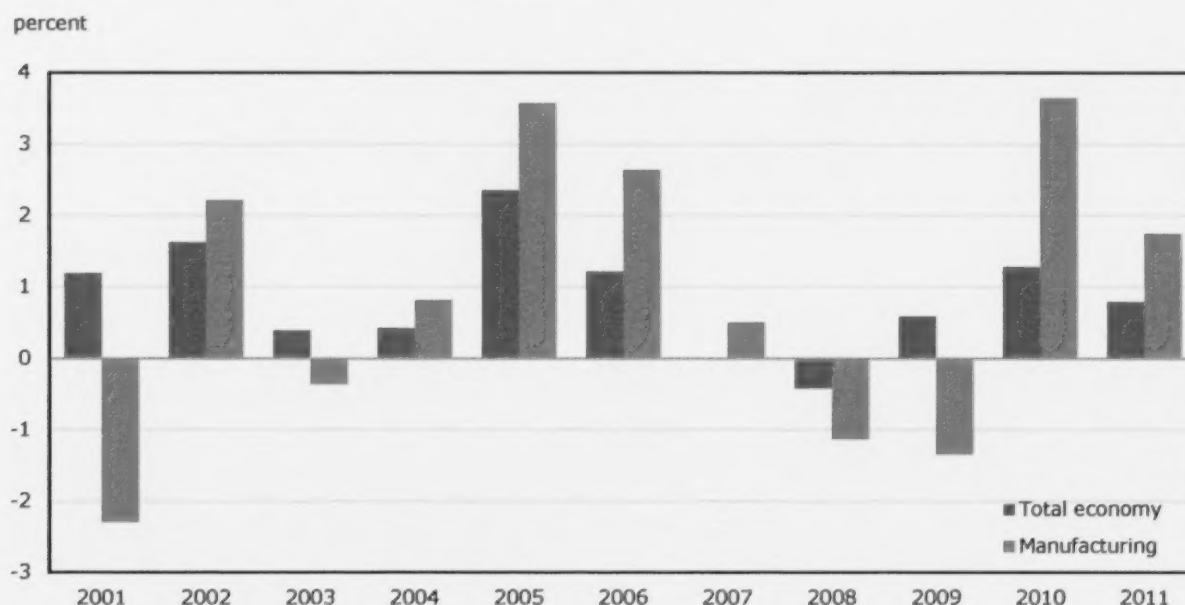
Source(s): Statistics Canada, Employment (SEPH), CANSIM table 281-0023

#### 6.4 Productivity and hourly compensation increase for workers<sup>12</sup>

Another important indicator is labour productivity, which is a measure of how effectively labour is transformed into output. In more precise terms, labour productivity is defined as the amount of real GDP per hour worked. In 2011, manufacturing real GDP increased by 2.5% while the number of hours worked increased by only 0.7%. Consequently, labour productivity rose 1.7% in 2011. In comparison, labour productivity for the total economy only grew by 0.8% in 2011. In terms of the value of labour, total compensation per hour worked in manufacturing increased by 2.0% in 2011, while the average compensation for the total economy increased by 2.9%.

<sup>12</sup> Data in this section are seasonally adjusted

Chart 11  
Annual growth rate in labour productivity



Source(s): Statistics Canada, Labour productivity measures, CANSIM table 383-0012

## 6.5 Investment and profits continue to grow after the downturn

Sixteen out of 21 industries had suffered major setbacks in capital expenditures during the economic downturn. In 2009, capital expenditures dropped 27.9%. However, 2011 witnessed a turn-around as capital expenditures in manufacturing increased by 21.5% to \$19 billion. A total of nine of 21 industries have recovered and surpassed previous expenditure levels. The primary metal industry was the main contributor to the increase. Other industries with gains included transportation equipment, paper, and petroleum and coal products. Petroleum and coal product manufacturers posted an increase of 13.4%.

Table 3  
Capital expenditures, millions of dollars

	2007	2008	2009	2010	2011	2012
Manufacturing	20,623.3	19,924.6	14,357.8	15,643.3	19,012.3	20,265.6
Petroleum and coal products manufacturing	2,478.7	3,009.2	1,893.3	1,881.7	2,134.7	1,699.5
Chemical manufacturing	1,972.7	1,882.8	1,557.0	1,573.1	1,735.3	1,851.4
Primary metal manufacturing	1,558.4	1,917.5	1,176.1	2,086.5	3,008.8	4,060.5
Transportation equipment manufacturing	4,638.1	3,777.0	2,099.0	1,844.9	2,510.0	2,158.2

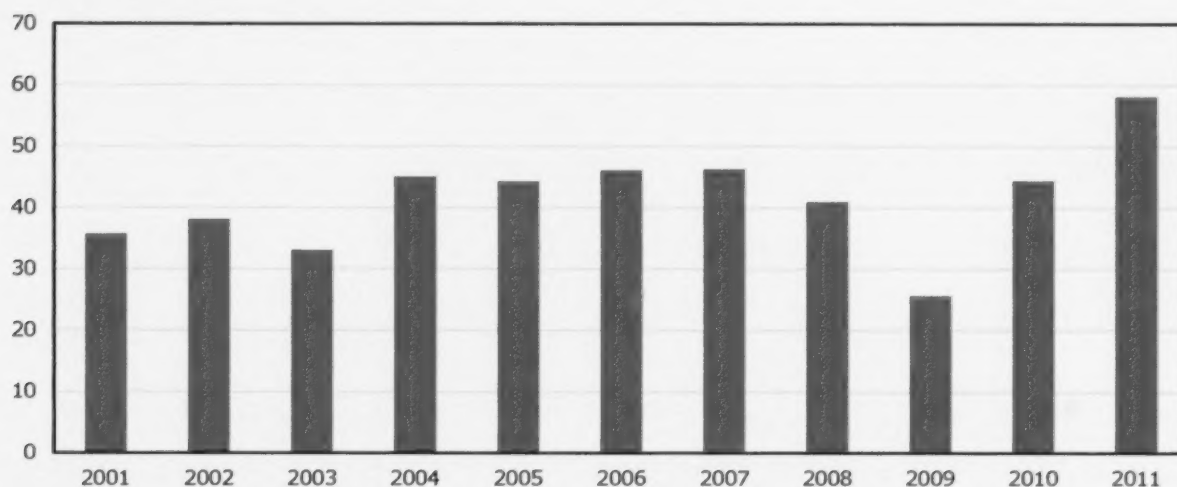
1. Most recent 2 years of data are preliminary actuals and intentions.

Source(s): Statistics Canada, Capital and repair expenditures, CANSIM table 029-0009

Operating profits for manufacturers increased by 30.8% in 2011 to \$58.1 billion. After dropping by over one third of their value due to the economic downturn in 2009, operating profits bounced back in 2010 rising by 73.3% and surpassing their previous levels. Up again in 2011, operating profits are at their highest level ever recorded.

Chart 12  
Manufacturing operating profits

billions of dollars



Source(s): Statistics Canada, Financial statements and performance, CANSIM table 187-0001

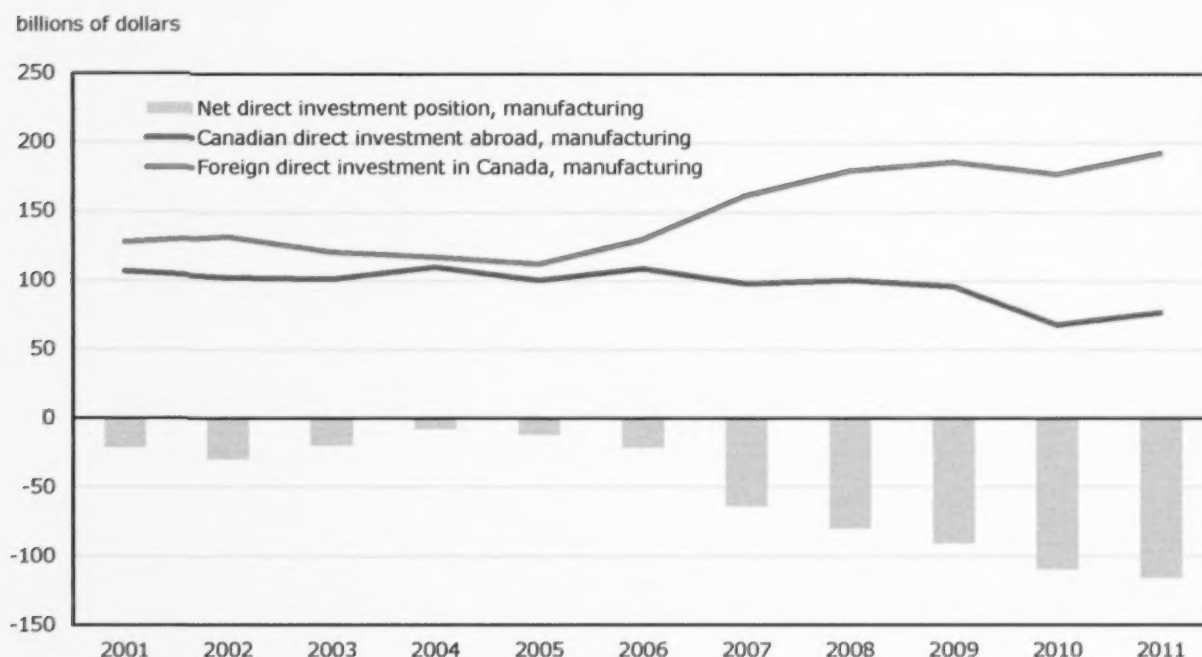
## 6.6 Foreign Direct Investment in Canadian manufacturing increases

Foreign direct investment in Canadian manufacturing increased by 8.6% in 2011 to \$192.7 billion. Manufacturing remains the most important industry for foreign direct investment in Canada, accounting for 31.7% of the total in 2011. Despite a minor setback in 2010, foreign direct investment in manufacturing has risen since 2006. The United States is mainly responsible for the increase, up 14.2% in 2011. After decreasing by 10% in 2010, foreign direct investment from Europe increased again in 2011 and is contributing to the overall increase (+3.5%).

Among manufacturing industries, petroleum and coal products witnessed the largest boom in foreign investment. In 2011, foreign direct investment in petroleum and coal increased by 14.1% to \$46 billion. Meanwhile, food manufacturing reported the second highest dollar increase, up by 29.7% to \$18.9 billion, while transportation equipment was third (+17.5%). Decreases in foreign direct investment were posted by the computer and electronic products, and primary metals industries.



Chart 13  
Foreign direct investment position, manufacturing



Source(s): Statistics Canada, International investment position, CANSIM table 376-0052

## 6.7 Canadian manufacturing exports and imports increase<sup>13</sup>

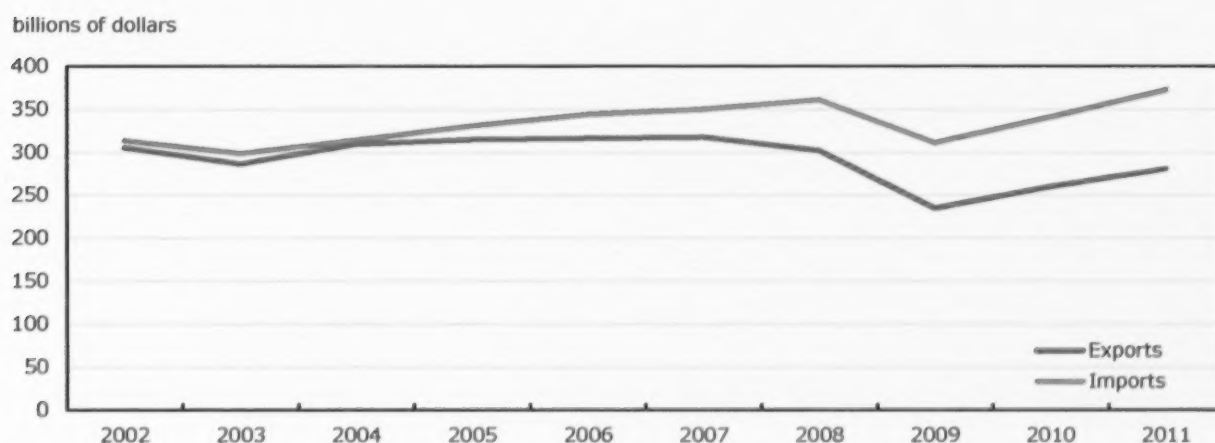
Exports from Canadian manufacturers increased in 2011, up by 7.9% to \$280.4 billion. Almost three-quarters of the dollar increase in 2011 were due to exports directed to the United States. Note that even though the United States remains the most important trading partner for Canadian manufacturers, over the last ten years, the share of Canadian manufacturing exports directed to the U.S. has decreased from 87.7% to 76.9%, while the percentage share of exports from Canadian manufacturers directed to China, which receives the second highest amount of Canadian exports, has tripled, rising to 3.3%. By industry, the largest increases in exports were reported by primary metals, petroleum and coal and chemical manufacturers. Machinery and Food manufacturers also contributed to the gains.

Although both exports and imports have posted increases in 2010 and 2011, imports by Canadian manufacturers have grown faster than exports, thereby increasing the trade deficit for Canadian manufacturing. Imports increased by 9.3% in 2011 to \$372.5 billion, largely reflecting increased imports from the United States. Similar to exports, imports have become more diversified due to the share of total imports from the United States decreasing in the last decade while the share of imports from China and Mexico has grown. The increases reported in 2011 by petroleum and coal, machinery, transportation equipment, primary metals and computer and electronic manufacturers were the main drivers of the overall increase.

<sup>13</sup> Data are from Industry Canada, Trade data online. See: <http://www.ic.gc.ca/eic/site/tdo-dcd.nsf/eng/home>



Chart 14  
Exports and imports of Canadian manufacturers



Source(s): Industry Canada, Trade data online